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AFRL names 5th Annual Award Winners

by Katherine Gleason, AFRL Public Affairs

WRIGHT-PATTERSON AFB, Ohio — The Air Force Research Laboratory honored its best by presenting awards to the top enlisted airmen and officer for their contributions and accomplishments at the 5th annual awards banquet held Feb. 22.

Maj. Gen. Paul D. Nielsen, commander of the Air Force Research Laboratory, and Lt. Gen. Richard R. Reynolds, commander of the Aeronautical Systems Center, presented the awards at the ceremony at Hope Hotel.

AFRL Airman of the Year

The award for Outstanding Airman was presented to Senior Airman Clifford J. Johnson, Communications & Navigation Systems Journeyman

Johnson is a High Power Microwave Technician for the Directed Energy Directorate, Kirtland Air Force Base, N.M. His other duties include building manager of four testing facilities, computer and equipment account custodian, division vehicle control officer, and division safety and hazardous material officer. He also served a one-year tour on the Team Kirtland Honor Guard.

AFRL ANNUAL AWARD WINNERS — Pictured from top (left to right) Senior Airman Clifford J. Johnson, Staff Sgt. Damien E. Seals, Master Sgt. Barbara J. Cron, Capt. William P. Surrey, Maj. Teresa H. O'Donnell

On base, he is active in the AFRL Enlisted Association, the Kirtland Boys and Girls Club, and Kirtland Little League Baseball. Off base, he is a member of the Veterans of Foreign Wars Post 14001.

Johnson has been awarded Directed Energy Airman of the Quarter, first quarter 2001, and AFRL Airman of the Quarter, first quarter 2001, which afforded him the opportunity to compete and win the Directed Energy Airman of the Year 2001.

Last year, he deployed to Saudi Arabia in support of Operation Southern Watch.

He has been assigned to Kirtland Air Force Base since September 1999.

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http://extra.afrl.af.mil/news/index.htm

Research facility designs near completion

by Fran Crumb, Information Directorate

ROME, N.Y. — Final design plans are expected to be completed next month for the new Air Force Research Laboratory's Information Directorate Research Facility at the Griffiss Business & Technology Park.

Atkins Benham Constructors of Oklahoma City, Okla., was awarded a $19.7 million contract in September for construction of the 100,000-square-foot facility, which will be the centerpiece of a unique, $24.8 million partnership between the Air Force and New York State.

The Congressionally-approved project is the result of joint funding and support by the Air Force Military Construction Program and the state's Empire State Development Corp. Actual construction is expected to begin in April and be completed by October 2003. The contract is being administered by the Naval Facilities Engineering Command, Philadelphia, Pa., which is responsible for military construction in the Northeast.

The new building is the second phase of a construction plan that will result in a state-of-the-art laboratory and research facility. The first phase of the program consisted of demolition of approximately 200,000 square feet of space of the east wing and "headhouse," or front portion, of Building 2 at 425 Brooks Road. The west wing of the building, a sprawling World War II era warehouse, was remodeled and occupied by directorate support offices as a result of the 1993 Base Realignment and Closure Commission decision on the former Griffiss Air Force Base.

The consolidation will create a building complex housing the Information Directorate's technical divisions. That complex, along with the existing Building 106, will become the principle area of directorate operations. The directorate will vacate three existing buildings located about a half mile from the proposed core area. In addition, security personnel will relocate from current facilities in a fourth building.

The goal of this new research facility is to enhance research collaboration among the directorate staff in a state-of-the-art research environment. The total project cost also includes modifications to the existing Building 3 and site enhancements. **@**

Find additional Fe@tures on the web

Ricky Arcuri selected as Champion Child

Information Institute holds anniversary workshop

AFRL chemist featured on stage in Maria Callas play

HE marathoner is training to give back to community

by Susan Barone, ASC Public Affairs

WRIGHT-PATTERSON AFB, Ohio — It's 5 a.m. at the Wright Field Fitness Center as Scott Hall starts his day of strength and weight training for the Flying Pig Marathon held May 5 in Cincinnati.

A technology transfer manager in the Air Force Research Laboratory Human Effectiveness Directorate, Hall participates in Team in Training, a program of the Leukemia and Lymphoma Society. The program provides expert coaching and a personalized training program to walk or run a marathon, cycle a century or participate in a triathlon.

"In May, I'll have completed my fourth marathon with Team in Training," said Hall. "The program provides a daily training schedule, health and fitness clinics and group training. People of all ages and athletic abilities have joined this well-structured program. We have people who have never run or walked a mile before get out there and complete a marathon."

Along with having the support of coaches and mentors, participants also attend clinics on injury prevention, nutrition, strength training and shoe selection.

"Each runner is assigned a patient hero — usually a young child battling blood-related cancer from the Dayton area — and we run in honor of this person," he said. "We also have the opportunity to get to know these young heroes through outings, e-mails, and cards of encouragement. They are our inspiration."

Hall runs for his personal heroes. He runs in memory of his brother-in-law Rob McBride, who died in July from Hodgkin's disease. He also runs for another relative, Roger Horn, who lives in Columbus, and has lymphoma.

"We usually wear a "hospital" bracelet on our wrist with the hero's name on it for inspiration as we train," Hall said

Before 1999, Hall had never run a marathon. He received a direct mailing card from Team in Training, and decided to attend an informational meeting.

Hall said it didn't take long for the program to hook him after he heard people, like himself, talk about their experiences and listened to the experiences of parents and their young heroes who battle these blood-related diseases.

"At first, I started the program because I wanted to get fit, lose a bit of weight and be able to say I'd run a marathon," he said. "This program allowed me to meet my goals. Over time, however, my participation became something I felt I could give back to the community as I became associated with the mentors and saw the good this program has done for a lot of people across the U.S."

"It's just absolutely fantastic to see people build friendships over the four to six months of training, and to see them accomplish something they have never been able to do in the past," he said. **@**

Annual Awards (from page 1)

Non-Commissioned Officer of the Year

Staff Sgt. Damien E. Seals, Electrical Systems Journeyman, was selected as the Outstanding Non-Commissioned Officer of the year.

Seals is a research electrician for the Propulsion Directorate, Edwards Air Force Base, Calif.

He is active in on base programs, such as the Leuhman Ridge Enlisted Organization, where he serves as president. He is a head coach in the YMCA Youth League and assists with local basketball camps throughout the year.

Seals earned the Propulsion Directorate NCO of the Quarter Award for the Second Quarter, 2001. Other career highlights include participation in Operations DESERT FOX and BRIGHT STAR.

He has been assigned to Edwards Air Force Base since November 2000.

Senior-Non Commissioned Officer of the Year

Outstanding Senior Non-Commissioned Officer of the Year was presented to Master Sgt. Barbara J. Cron, Information Management Craftsman.

She is the chief of headquarters web development team, technology transfer and corporate communications division, plans and programs directorate, Wright-Patterson Air Force Base, Ohio.

Cron is active on base in the Air Force Sergeants Association, and off base she is active in local school programs.

She has been awarded the Human Effectiveness Directorate SNCO of the Quarter for January-March 2000, Wright Research Site SNCO of the Quarter for January-March 2001.

Last year Cron deployed in support of Operation NORTHERN WATCH.

She has been assigned to Wright-Patterson Air Force Base since July 1999.

Company Grade Officer of the Year

Captain William P. Surrey, Air Vehicles Contract Negotiator, was awarded the Outstanding Company Grade Officer of the Year.

Surrey is a Contracting Officer/Negotiator for the Air Vehicles Directorate, Wright-Patterson Air Force Base, Ohio.

He received a warrant and was appointed the sole Small Business Innovative Research Phase 1 Contracting Officer for all five directorates at Wright Site. His SBIR team was named the Detachment 1 AFRL/PK team of the quarter.

Surrey is active in on base programs, including sporting activities, the National Contract Management Association, and the Logistics Officer Association.

His accomplishments include squadron CGO of the quarter eight times, Logistics Group CGO of the quarter three times, and Logistics Group CGO of the year. He was also named Contracting Officer of the Year for Fiscal Year 2001.

Surrey has been assigned to Wright-Patterson Air Force Base since August 2000.

Reservist of the Year

Maj. Teresa H. O'Donnell, Individual Mobilization Augmentee to the Commander, Detachment 3, Hanscom, Air Force Base, Mass., was selected as the Outstanding Reservist of the Year.

An AFROTC 1985 distinguished graduate, she served five years with electronic systems division and Rome Air Development Center. A reservist since 1991, she has subsequently served with the Selective Service System, Rome Laboratory and now, AFRL.

O'Donnell is a senior scientist at ARCON Corporation, Waltham, Mass., where she researches genetic antenna design. She holds four U.S. patents, has over 20 technical publications, and is an active music minister in her community. She has been at Hanscom AFB since 1986. **@**

ML senior scientist receives Lifetime Achievement Award

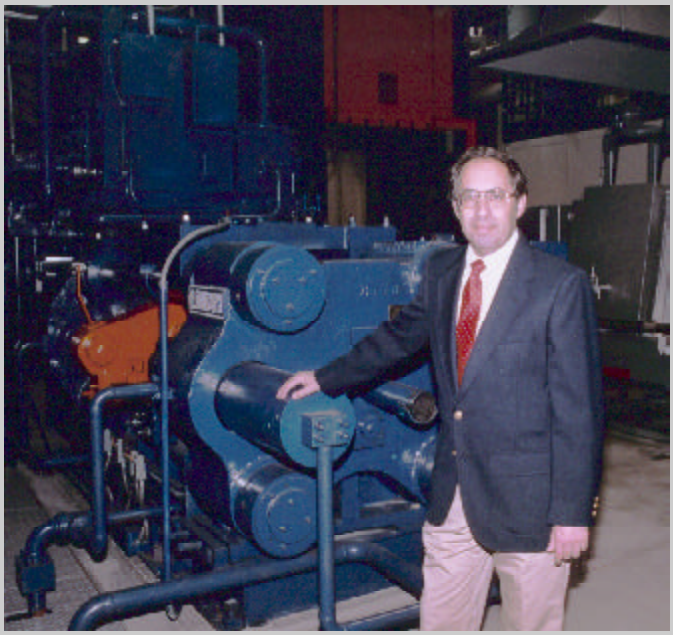
by Pete Meltzer, Materials and Manufacturing Directorate

WRIGHT-PATTERSON AFB, Ohio — A senior scientist at the Air Force Research Laboratory's Materials and Manufacturing Directorate received a "Lifetime Achievement Award" at the most recent gathering of the Thermec International Conference on Processing & Manufacturing of Advanced Materials.

Dr. Lee Semiatin, assigned to the directorate's Metals, Ceramics and Nondestructive Evaluation Division, was one of six individuals worldwide to receive the award, presented at conferences just every three years. He was cited for outstanding contributions in advancing the understanding of the thermomechanical processing of titanium and titanium aluminide alloys—materials highly valued by both the military and commercial industry.

Semiatin's leadership and technical contributions have led to improvements in existing processes and the successful development of new processes for high temperature alloys. His selection for lifetime honors recognizes individual achievement and the scientific contributions of the Air Force Research Laboratory, and enhances the ML's reputation as a world leader in materials research and development.

Semiatin received his undergraduate degree in Engineering Mechanics at Johns Hopkins University and his master's and doctorate degrees in Metallurgy and Materials Science from Carnegie-Mellon University. He worked for the Battelle Memorial Institute from 1978 to 1991. Much of his research there, including basic studies on hot working of aerospace alloys, supported ML and the Air Force Office of Scientific Research (AFOSR).



LIFETIME ACHIEVEMENT — Award winner, Dr. Lee Semiatin, shows off an instrumented extrusion press at the Air Force Research Laboratory's Materials and Manufacturing Directorate. (Air Force photo)

In 1991, Semiatin joined ML's Metals, Ceramics and Nondestructive Evaluation Division as research leader of the Processing Science Group. For more than a decade, he has led the research effort in five highly important areas including advanced metallic and intermetallic alloys; metal and ceramic matrix composites; conventional titanium, nickel, and aluminum alloys; novel processes; and, the development of advanced models to describe material behavior under processing conditions.

The result has been successful development of new forging, extrusion, and rapid heat treatment processes, some of which are being used in aviation and aerospace parts production. In recognition, the Processing Science Group was named an AFOSR "Star Team" in 1992, 1995 and 2000.

Semiatin's research efforts over the past 25 years have expanded the knowledge of not only titanium and titanium aluminide alloys, but other difficult-to-process materials such as nickel-based superalloys and refractory alloys. He received the National Aerospace Plane Titanium Aluminide Achievement Award in 1989 and is a recipient of ML's Charles J. Cleary Scientific Achievement Award (1993), an Air Force Scientific Achievement Award (1994), and the Air Force Basic Research Award (1995).

Semiatin has earned "Fellow" appointments from ASM International (1992) and the Air Force Research Laboratory (1993). He is a member of the Minerals, Metals, and Materials Society, and an honorary member of Alpha Sigma Mu.

As an adjunct professor in the Industrial, Welding and Systems Engineering Department at the `Ohio State University and the Materials Program at the University of Dayton, Semiatin advises graduate students on their thesis and dissertation research, which oftentimes is in areas of value to both the Air Force and private industry. **@**

Dr. Wicks promoted to senior scientist position at Rome

by Fran Crumb, Information Directorate

ROME, N.Y. — Dr. Michael C. Wicks, a 22-year veteran of Air Force research and development in Rome, has been named senior scientist for sensor signal processing. Wicks will be responsible for signal processing algorithm development for all sensors — including radar, infrared and optical - developed or supported by the Air Force Research Laboratory's Sensors Directorate. While directorate management offices are located at Wright-Patterson Air Force Base, Ohio, Wicks will continue to work with Sensors personnel at the AFRL Rome Research Site.

Previously an electronics engineer at the Radar Signal Processing Branch, Wicks holds an associate's degree in engineering sciences from Mohawk Valley Community College and a bachelor of science degree in electrical engineering from Rensselaer Polytechnic Institute. He earned his master's and doctorate degree in electrical engineering from Syracuse University and also was awarded a master of arts in public administration from the same institution.

Wicks joined the Rome staff as a summer intern in 1980, and became a full-time employee the following year. He is a fellow of the Institute of Electrical and Electronics Engineers (IEEE), and the author of numerous publications. **@**

Flight of Controlled Test Vehicle, mission deemed successful

by Rex Swenson, Munitions Directorate

EGLIN AFB, Fla. — The world's smallest cruise missile, known as the Powered Low-Cost Autonomous Attack System (PLOCAAS), reached a significant milestone on February 4, with the successful flight of the missile in its Controlled Test Vehicle (CTV) configuration. Under development by Lockheed Martin Missiles & Fire Control of Grand Prairie, Texas, PLOCAAS is a 54-month Advanced Technology Demonstration (ATD) for the Air Force Research Laboratory's Munitions Directorate.

According to James Moore, the Directorate's program manager, The CTV represents the first in a series of flight tests to demonstrate a powered miniature munitions capability to autonomously search, detect, identify, and destroy ground mobile targets. The CTV configuration did not contain a warhead and used a forward-looking nose camera in place of the laser radar or LADAR seeker.

"This CTV flight test demonstrated successful operation of the airframe, engine subsystem, guidance and navigation software, and represents the first step toward a fully functioning, tactically representative PLOCAAS. Subsequent tests will build on what we've demonstrated with CTV," said Moore.

For this mission, the CTV's wings were pre-deployed and the miniature turbojet engine was started prior to release from a Cessna 441 carrier aircraft. Following engine start, the CTV was released and safely separated from the carrier aircraft over Eglin Range B-70. The CTV achieved stabilized flight, performed waypoint navigation, conducted a programmed search pattern, and simulated an attack on a surface-to-air missile radar target to demonstrate the Suppression of Enemy Air Defense mission. The simulated attack concluded the primary phase of the mission after which the CTV performed a series of maneuvers to test its performance characteristics. As planned, the Eglin Range Safety personnel successfully terminated the CTV flight by initiating the flight termination system.

According to James Savage, PLOCAAS test engineer, the CTV flight test set a record for the Directorate. This is the longest flight time of any weapon system developed and tested by the Munitions Directorate. The CTV traveled 46 nautical miles, flew approximately 15 minutes, and reached a top speed of nearly 300 knots.

CTV ON THE CESSNA AIRCRAFT CARRIER (Air Force photo)

"The flight test did not come without its difficulties," explained Savage. The first couple of missions were canceled due to poor weather, and the test team, test aircraft, and all the supporting equipment had to vacate King Hanger as a result of a recent visit to Eglin by President Bush. "However, due to the dedication of the PLOCAAS test team and Team Eglin, we were able to successfully conduct the CTV flight test," Savage said.

The CTV is the first of four flights planned for the PLOCAAS ATD. The next flight test, Guided Test Vehicle, adds the LADAR seeker and associated Autonomous Target Acquisition software for detecting and identifying ground mobile targets. Future tests will incorporate a live multimode warhead and the ability to start the engine and unfold the wings in flight after release from the carrier aircraft. All of these tests will use the test range and assets available at Eglin AFB. **@**

Technology demonstrated in criminal activity application

by Fran Crumb, Information Directorate

ROME, N.Y. —Researchers at the Air Force Research Laboratory's Information Directorate have successfully demonstrated advanced voice processing technology designed to reduce telephone criminal activity by inmates at state and federal prisons.

Funded by the National Institute of Justice (NIJ), scientists and engineers with the directorate and Research Associates for Defense Conversion of Marcy, N.Y., jointly developed and demonstrated an experimental model capability that automatically extracts information from conversational speech. This technology will address a troublesome telephone problem within both federal and state prisons. Previous studies concluded that prisoners are using telephones on a large scale to continue illegal activity that is both dangerous and expensive to the public.

The AFRL information extraction capability, called TADD (Telephone Abuse Detection Demonstration), was developed to detect a variety of criminal activity conducted over prison telephones, including credit card fraud, drug solicitation, harassment, and threats to witnesses and victims. TADD utilizes several audio technologies to detect and recognize certain criminal activities. Test results on a controlled database of conversations, collected over the type of phones used in the prisons, demonstrated performance 76 to 100 percent successful in detecting the targeted criminal activities. This technology has the potential to save hundreds of millions of dollars in telephone monitoring costs over current methods used to monitor the more than 100,000 calls made each day by inmates at federal prisons. And, while TADD was developed for the NIJ and the Federal Bureau of Prisons, the technology also has direct information extraction application to the Air Force intelligence, surveillance, and reconnaissance (ISR) monitoring mission and to military communication security. **@**

Net Index

Due to the number of submissions we receive, some sections of *news@**afrl*** are available exclusively on-line. The on-line version of the newsletter allows users to view the AFRL corporate calendar, news releases generated by AFRL headquarters, operating instructions, L@b L@urels and Roundups sections.

The L@b L@urels section of the electronic newsletter is dedicated to members of Air Force Research Laboratory who receive awards and honors. The Roundups section of the electronic newsletter keeps Air Force Research laboratory employees informed about contracts AFRL has awarded. Below is an index of articles one can find in each of these on-line sections.

L@b L@urels

- **Directorate honors military and civilians**
- **Holzhauer named Engineer of the Year**
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Stay tuned for the April edition featuring...

AFRL runners contribute to million-dollar heart event

AFRL huddles over Hubble trouble

For more on these stories see news@afrl
http://extra.afrl.af.mil/news/index.htm

N.M. fifth grade students "colonize" planet Mars

ALBUQUERQUE, N.M. — Seventy-eight air-pressure-filled plastic enclosures take shape at Kirtland Air Force Base, N.M., during the Air Force Research Laboratory sponsored Mars Asteroid Defense Mission Link-Up. Held in an Air Force hangar on March 1, approximately 1,800 5th grade students were joined by their teachers and parents to complete the half-day event, which included assembling a simulated Martian colony. The five-month program teaches elementary school students about the planet Mars and space exploration. Operated by the laboratory's Directed Energy and Space Vehicles Directorates, the project encourages the students to use math, science, engineering, communications, and the arts. (Air Force photo) @

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To submit L@b L@urels or Roundups from your directorate, send a query to AFRL Public Affairs at:

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